

Appln No. 09/693,647
Amdt. Dated December 10, 2003
Response to Office action of October 7, 2003

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Amendments to the Specification:

The paragraph beginning at Page 1, lines 8-32, through to page 2, lines 1-23 to be amended as follows:

Sub B¹

Various methods, systems and apparatus relating to the present invention are disclosed in the following co-pending applications filed by the applicant or assignee of the present invention on October 20, 2000:

09/693,415 (NPA011US),	09/693,219 (NPA031US),	09/693,280 (NPA040US),
09/693,515 (NPA046US),	09/693,705 (NPA053US),	09/693,647 (NPA059US),
09/693,690 (NPA064US),	09/693,593 (NPB006US),	6,474,888 (NPS004US),
09/693,341 (NPS008US),	09/696,473 (NPS013US),	09/696,514 (NPS024US),
09/693,301 (NPPG1),	6,454,482 (UP01US),	09/693,704 (UP02US),
6,527,365 (UP03US),	6,474,773 (UP04US),	09/693,335 (UP05US)

The disclosures of these co-pending applications are incorporated herein by reference.

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Various methods, systems and apparatus relating to the present invention are disclosed in the following co-pending applications filed by the applicant or assignee of the present invention on September 15, 2000:

09/663,579 (NPA024US),	09/669,599 (NPA025US),	09/663,701 (NPA047US),
09/663,640 (NPA049US),		

The disclosures of these co-pending applications are incorporated herein by reference.

Various methods, systems and apparatus relating to the present invention are disclosed in the following co-pending applications filed by the applicant or assignee of the present invention on June 30, 2000:

09/609,139 (NPA014US),	09/608,970 (NPA015US),	09/609,039 (NPA022US),
09/607,852 (NPA026US),	09/607,656 (NPA038US),	09/609,132 (NPA041US),
09/609,303 (NPA050US),	09/610,095 (NPA051US),	09/609,596 (NPA052US),
09/607,843 (NPA063US),	09/607,605 (NPA065US),	09/608,178 (NPA067US),
09/609,553 (NPA068US),	09/609,233 (NPA069US),	09/609,149 (NPA071US),
09/608,022 (NPA072US),	09/609,232 (NPB003US),	09/607,844 (NPB004US),
6,457,883 (NPB005US),	09/608,920 (NPP019US),	09/607,985 (PEC04US),
6,398,332 (PEC05US),	6,394,573 (PEC06US),	09/606,999 (PEC07US)

The disclosures of these co-pending applications are incorporated herein by reference.

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Various methods, systems and apparatus relating to the present invention are disclosed in the following co-pending applications filed by the applicant or assignee of the present invention on 23 May 2000:

09/575,197 (NPA001US), 09/575,195 (NPA002US), 09/575,159 (NPA004US),
 09/575,132 (NPA005US), 09/575,123 (NPA006US), 09/575,148 (NPA007US),
 09/575,130 (NPA008US), 09/575,165 (NPA009US), 09/575,153 (NPA010US),
 09/575,118 (NPA012US), 09/575,131 (NPA016US), 09/575,116 (NPA017US),
 09/575,144 (NPA018US), 09/575,139 (NPA019US), 09/575,186 (NPA020US),
 09/575,185 (NPA021US), 09/575,191 (NPA030US), 09/575,145 (NPA035US),
 09/575,192 (NPA048US), 09/575,181 (NPA075US), 09/575,193 (NPB001US),
 09/575,156 (NPB002US), 09/575,183 (NPK002US), 09/575,160 (NPK003US),
 09/575,150 (NPK004US), 09/575,169 (NPK005US), 09/575,184 (NPM001US),
 6,502,614 (NPM002US), 09/575,180 (NPM003US), 09/575,149 (NPM004US),
 6,549,935 (NPN001US), 09/575,187 (NPP001US), 09/575,155 (NPP003US),
 6,591,884 (NPP005US), 6,439,706 (NPP006US), 09/575,196 (NPP007US),
 09/575,198 (NPP008US), 09/575,178 (NPP016US), 6,428,155 (NPP017US),
 09/575,146 (NPP018US), 09/575,174 (NPS001US), 09/575,163 (NPS003US),
 09/575,168 (NPS020US), 09/575,154 (NPT001US), 09/575,129 (NPT002US),
 09/575,124 (NPT003US), 09/575,188 (NPT004US), 09/575,189 (NPX001US),
 09/575,162 (NPX003US), 09/575,172 (NPX008US), 09/575,170 (NPX011US),
 09/575,171 (NPX014US), 09/575,161 (NPX016US), 6,428,133 (HJ52US),
 6,527,365 (HJ52US), 6,315,399 (MJ10US), 6,338,548 (MJ11US),
 6,540,319 (MJ12US), 6,328,431 (MJ13US), 6,328,425 (MJ14US),
 09/575,127 (MJ15US), 6,383,833 (MJ34US), 6,464,332 (MJ47US),
 6,390,591 (MJ58US), 09/575,152 (MJ62US), 6,328,417 (MJ63US),
 6,409,323 (PAK04US), 6,281,912 (PAK05US), 6,604,810 (PAK06US),
 6,318,920 (PAK07US), 6,488,422 (PAK08US), 09/575,108 (PEC01US),
 09/575,109 (PEC02US), 09/575,110 (PEC03US)

The disclosures of these co-pending applications are incorporated herein by reference.

The paragraph beginning at page 12, line 3-13, to be amended as follows:

In the preferred embodiment, the invention is configured to work with the netpage networked computer system, a summary of which is given below and a detailed description

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of which is given in our earlier applications, including in particular applications USSN 09/575,129 ~~(docket no. NPT002US)~~, USSN 09/575,174 ~~(docket no. NPS001US)~~, USSN 09/575,155 ~~(docket no. NPP003US)~~, USSN 09/575,195 ~~(docket no. NPA002US)~~ and USSN 09/575,141 ~~(docket no. IJ52US)~~. It will be appreciated that not every implementation will necessarily embody all or even most of the specific details and extensions described in these applications in relation to the basic system. However, the system is described in its most complete form to assist in understanding the context in which the preferred embodiments and aspects of the present invention operate.

The paragraph beginning at page 13, lines 18-31, to be amended as follows:

As illustrated in Figure 2, the netpage pen 101, a preferred form of which is described in our earlier application USSN 09/575,174 ~~(docket no. NPS001US)~~, works in conjunction with a netpage printer 601, an Internet-connected printing appliance for home, office or mobile use. The pen is wireless and communicates securely with the netpage printer via a short-range radio link 9.

A3
The netpage printer 601, preferred forms of which are described in our earlier application USSN 09/575,155 ~~(docket no. NPP003US)~~ and our co-filed application USSN 09/693,514 ~~(docket no. NPS024US)~~, is able to deliver, periodically or on demand, personalized newspapers, magazines, catalogs, brochures and other publications, all printed at high quality as interactive netpages. Unlike a personal computer, the netpage printer is an appliance which can be, for example, wall-mounted adjacent to an area where the morning news is first consumed, such as in a user's kitchen, near a breakfast table, or near the household's point of departure for the day. It also comes in tabletop, desktop, portable and miniature versions.

The paragraph beginning at page 14, lines 10-17, to be amended as follows:

A4
The netpage system is made considerably more convenient in the preferred embodiment by being used in conjunction with high-speed microelectromechanical system (MEMS) based inkjet (Memjet™) printers, for example as described in our earlier application USSN 09/575,141 ~~(docket no. IJ52US)~~. In the preferred form of this technology, relatively high-speed and high-quality printing is made more affordable to

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A4
consumers. In its preferred form, a netpage publication has the physical characteristics of a traditional newsmagazine, such as a set of letter-size glossy pages printed in full color on both sides, bound together for easy navigation and comfortable handling.

The paragraph beginning at page 18, line 28-31 through to page 19, lines 1-11, to be amended as follows:

A5
One embodiment of the physical representation of the tag, shown in Figure 4a and described in our earlier application USSN 09/575,129 (docket no. NPT002US), includes fixed target structures 15, 16, 17 and variable data areas 18. The fixed target structures allow a sensing device such as the netpage pen to detect the tag and infer its three-dimensional orientation relative to the sensor. The data areas contain representations of the individual bits of the encoded tag data. To maximise its size, each data bit is represented by a radial wedge in the form of an area bounded by two radial lines and two concentric circular arcs. Each wedge has a minimum dimension of 8 dots at 1600 dpi and is designed so that its base (its inner arc), is at least equal to this minimum dimension. The height of the wedge in the radial direction is always equal to the minimum dimension. Each 4-bit data symbol is represented by an array of 2x2 wedges. The fifteen 4-bit data symbols of each of the six codewords are allocated to the four concentric symbol rings 18a to 18d in interleaved fashion. Symbols are allocated alternately in circular progression around the tag. The interleaving is designed to maximise the average spatial distance between any two symbols of the same codeword.

The paragraph beginning at page 19, line 24-31 through to page 20, line 1, to be amended as follows:

A6
An alternative tag structure more suited to a regular tiling is shown in Figure 5a. The tag 4 is square and has four perspective targets 17. It is similar in structure to tags described by Bennett et al. Van de Grift et al. in US Patent 5,051,746. The tag represents sixty 4-bit Reed-Solomon symbols 47, for a total of 240 bits. The tag represents each one bit as a dot 48, and each zero bit by the absence of the corresponding dot. The perspective targets are designed to be shared between adjacent tags, as shown in Figures 5b and 5c. Figure 5b shows a square tiling of 16 tags and the corresponding minimum field of view 193, which must span the diagonals of two tags. Figure 5c shows a square tiling of nine

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tags, containing all one bits for illustration purposes.

The paragraph beginning at page 22, lines 2-12, to be amended as follows:

A7
An object-indicating (or function-indicating) tag contains a tag ID which directly identifies a user interface element in the page description associated with the region (or equivalently, a function). All the tags in the zone of the user interface element identify the user interface element, making them all identical and therefore indistinguishable. Object-indicating tags do not, therefore, support the capture of an absolute pen path. They do, however, support the capture of a relative pen path. So long as the position sampling frequency exceeds twice the encountered tag frequency, the displacement from one sampled pen position to the next within a stroke can be unambiguously determined. As an alternative, the netpage pen 101 can contain a pair or motion-sensing accelerometers, as described in our earlier application USSN 09/575,174 (docket no. NPS001US).

The abstract is to be amended as follows:

A8
The invention concerns device control for enabling electrical or electronic devices to be controlled through computer systems. Employing the invention involves the use of one or more control interfaces which are capable of being used to interacting with a computer system or network, each interface typically comprising sheet material such as paper which has coded data printed/disposed on it and which allows it to be used to interact with the computer system by use of a sensing device operated by a user. Through this interaction, data can be forwarded to the computer system from the control interface to effect in that system an operation relating to the functioning of the device.

(Figure 8)